

## METHOD AND STRUCTURE FOR ECONOMICAL HIGH DENSITY CHIP CARRIER

### ABSTRACT

A flip-chip joinable substrate having non-plated-on contact pads and a method for making the same. The substrate has an external metal foil layer upon a dielectric layer upon a patterned internal metal layer having an internal contact area. An area of the external metal foil layer above the internal contact area is selected. A microvia cavity extending to the internal contact area is perforated centrally within the selected area and is filled with a mass of conductive paste forming an external contact pad. The external contact pad is used as an etch mask for removing the adjacent external metal foil.